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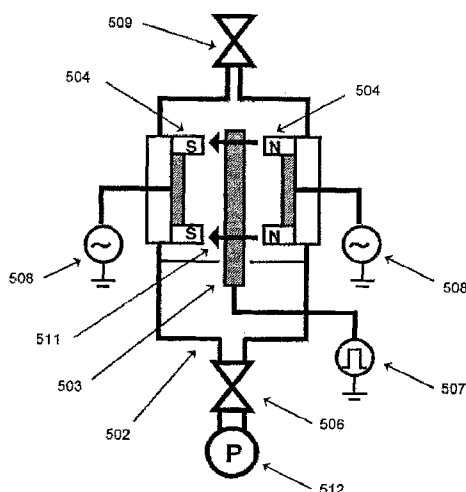
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FIG. 5



(57) Abstract: A step of subjecting a carbon film deposited and adhering onto a surface of the carrier to an ashing removal in oxygen-including gas is executed after a step of detaching a magnetic recording medium after film formation from the carrier and before a step of attaching a next film-formation substrate to the carrier, and a pulsed voltage bias is applied to the carrier when executing the step of subjecting the carbon film to the ashing removal. Further, at an initial stage of the step of subjecting the carbon film to the ashing removal, a concentration of inactive gas in the plasma is increased as compared with an oxygen gas concentration and the oxygen gas concentration is then increased as compared with the concentration of the inactive gas. As a result, the carbon film deposited on the substrate-holding carrier is effectively reduced, generation of particles to follow peeling off the deposited film is suppressed, and emission of outgas originating from the carbon film deposited on the surface of the carrier is suppressed.